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Atty. Docket No. STE01 P-798B

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner : Brian Zimmerman
Art Unit : 2735 06/379944
Appln. No. : 08/998,302 (unofficial)
Filing Date : December 24, 1997
Applicant : Joel D. Stanfield et al.
For : ELECTRONIC SYSTEM, COMPONENTS AND METHOD FOR TRACKING FILES

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

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PRELIMINARY STATEMENT

Prior to examining the above-identified application, please consider the following remarks. The remarks below explain why Applicants believe the present claims to be allowable over U.S. Patent No. 4,376,936 issued to Kott, U.S. Patent No. 5,455,409 issued to Smith et al., and U.S. Patent No. 5,287,414 issued to Foster, which had been applied in rejections of the claims in the parent application. The remarks below further address the comments the Examiner had made in the Advisory Action issued in the parent application.

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As pointed out in MPEP §2143.03, "To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." With respect to independent claim 1, neither Smith et al. nor Kott teaches or suggests that each addressable device be "responsive to a control signal including the unique address associated with the addressable device to transmit a signal back to said processor so that said processor may maintain the file location of each file in said database." Although the Kott patent discloses file folders that include addressable devices that respond by illuminating a light when their unique address is transmitted over a common communication line, these devices do not respond to such a control signal by transmitting a signal back to the processor. The tapes in the Smith et al. patent are not responsive to a control signal that includes their unique address. Thus, neither reference explicitly teaches this feature.

Applicants respectfully submit that one of ordinary skill in the art would not have reasonably considered the modifications that would be necessary to construct a system based on the teachings of Smith et al. and Kott that fall within the scope of the present invention. As noted above, the Examiner suggests that it would have been obvious to use a serial bus line rather than the dedicated lines between controller 300 and tape contact pads 38a-38c (Fig. 13 in Smith et al.) in order to reduce the amount of wiring needed for communication with the tapes positioned within these slots. Such a consideration has already been addressed, however, in the background of the Smith et al. patent. Specifically, in column 3, lines 7-17 and 51-56, Smith et al. states that systems that utilize a central database are undesirable because of the extensive systems of cables that must be connected between the

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host computer and the elements within each respective slot. Smith et al. further states that in large data processing centers, the connection of individual electrical cables between a host computer and each of the thousands or hundreds of thousands of slots located in thousands of shelf units or carriers throughout the library, would be difficult and very expensive. To eliminate this problem, Smith et al. provides a plurality of control circuits 42 for each of the twenty slots in a tape carrier and provides a serial bus connection between a host computer 52 and the various control circuits 42 of all the tape carriers. By providing separate control circuits 42 for each small group of slots and connecting these control circuits to the host computer via this serial communication line, the amount of wiring needed to implement the system is significantly reduced thereby addressing the problem raised in the background of the Smith et al. patent. Thus, despite the fact that Smith et al. was fully apprised of the need to reduce the amount of wiring between slots and the host processor, Smith et al. nevertheless opted to retain separate dedicated lines running between each control circuit 42 and the various slots 44 in a tape carrier 12a. Apparently, despite the existence of Kott, Smith et al. apparently believed it to be necessary to have dedicated lines connected to each slot.

It should also be noted that one of ordinary skill in the art would certainly have considered any consequences that would arise from making the modifications that are contemplated only by the Examiner. Specifically, if a single serial bus were used rather than the dedicated lines, and the tapes were modified to be responsive to a unique address, the processors would all need to be reprogrammed to transmit unique addresses over the serial

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bus line. Thus, if host computer 52 issued a request for a specific tape, each separate control circuit would have to issue a signal over this serial communication bus to the tape cartridges within its associated slots, wait for a response, and then if an affirmative response were received, control circuit 42 would have to respond back to host computer 52 in some manner.

Further, if the Smith et al. system were modified in this manner, it would be incapable of determining which slot the tape is actually in. Specifically, if control circuit 42 transmitted a signal over a common serial bus to all of slots 44 within tape carrier 12a (Fig. 6), it would not know from which slot a response came back. Without knowing which slot the response came from, control circuit 42 would then be incapable of illuminating an indicator light above the slot in which the tape is located and would be incapable of informing host computer 52 of the precise location of the tape. As noted in the Smith et al. patent, robotic arms are often used to remove a required tape from its slot for use by the host computer. However, absent the capability of identifying the particular slot in which a requested tape is located, the host computer 52 could not instruct the robotic arm from which slot to remove a tape. Hence, the modification suggested by the Examiner would destroy some key features of the Smith et al. system and render the system unsuitable for its intended purpose.

Additionally, to the extent that Smith et al. maintains a "database," the ability of the system to maintain a database of any sort would be destroyed by the modifications suggested by the Examiner. As pointed out in Applicants' previous response, the Smith et al. system

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polls its respective slots by transmitting a memory enable signal separately to each slot contact. If there is a tape within the slot, the tape responds by transmitting its unique volume/serial number back to microprocessor 300 of control circuit 42, which stores this identification number in a memory address corresponding to that particular slot. If the modification suggested by the Examiner were made whereby the microprocessor 300 could no longer separately poll each of its slots, the processors 300 could no longer maintain any form of database for storing a correspondence of the slots and the tapes stored in the respective slots.

For the reasons discussed above, it is clear that the modifications contemplated by the Examiner would completely render the Smith et al. system unsatisfactory for its intended purpose and change the principal of operation thereof (note MPEP §2143.01). Thus, Applicants submit that *prima facie* obviousness has not been established with respect to claim 1 and the claims that depend therefrom.

With respect to independent claims 19, 20, 23, and 28, neither Smith et al. nor Kott teaches or suggests a file locating or tracking system that utilizes a hierarchial arrangement of addressable devices that would result in the claimed invention. Specifically, neither Smith et al., Kott, nor Foster teaches or suggests providing addressable devices for both a folder retainer, such as a file drawer or file cabinet, and for each file folder contained within the folder retainer. Considering the applied references are totally silent as to this feature and that the Examiner has not provided any explanation of where such a feature is disclosed in these references or otherwise why such a feature would have been obvious, Applicants

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respectfully request that the Examiner either allow these claims and the claims that depend therefrom, or provide a more detailed explanation of why he believes these claims are obvious in view of the teachings of Smith et al., Kott, and Foster.

With respect to independent claim 30, Applicants submit that one of ordinary skill in the art would not have considered modifying the Smith et al. system in the manner suggested by the Examiner. Specifically, Applicants submit that one of ordinary skill in the art would not have considered utilizing a common communication path for communicating with at least two of the tapes provided in one of its tape carriers. For the reasons outlined above, Applicants submit that such a modification would destroy the ability of the Smith et al. system to maintain any form of database whatsoever. Insofar as independent claim 30 further recites that the system includes a database, Applicants submit that Smith et al., when modified in view of the teachings of Kott, would not include each and every feature of the claimed invention. Therefore, independent claim 30, as well as the claims that depend therefrom, are allowable over the teachings of the cited patents.

With respect to independent claim 34, Applicants submit that neither Smith et al. nor Kott discloses an electronic file tracking system in which each file folder includes a conductor located on the file folder that is configured so as to electrically couple the addressable device on each file folder to the electrical contacts of the folder retainer when the file folder is positioned in any one of several different positions. As pointed out in Applicants' previous response, the tape cartridges in Smith et al. do not include conductors that are configured to couple the memory device to the contacts in the tape carrier when the

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tape is positioned in one of several different positions. Likewise, the Kott reference does not disclose that the electrical contacts in the docket card folders would continue to make contact if the position of the docket card folder were in any different position than that disclosed in the patent. It is noted that the Examiner has not addressed this argument in the Office Action or during the interview. If the Examiner should choose to maintain this rejection, Applicants request that the Examiner provide a more detailed explanation of why he believes one of ordinary skill in the art would have found this feature to be obvious despite the fact it is not disclosed in either of the cited patents.

With respect to independent claim 43, Applicants had previously pointed out in their prior response that neither Smith et al. nor Kott teaches or suggests a file locating system that maintains general file information in a database. As clearly pointed out in the response, claim 124, and in the application itself, this "general file information" is information maintained in addition to the file location code and unique file address for each file folder. Given the manner in which the Smith et al. system is set up, it is clear that the "database" as used in Smith et al. could not include this additional information. To include this additional information, the system would clearly need to be modified to have some form of central database. However, as discussed above and in detail throughout the background portion of the Smith et al. patent, Smith et al. clearly teaches away from such a modification. As pointed out in MPEP §2141.02, a prior art reference must be considered in its entirety (*i.e.*, as a whole), including portions that would lead away from the claimed invention. Therefore, when determining whether an ordinarily skilled artisan would reasonably have considered

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making such a modification to the Smith et al. system, the Examiner must also consider the fact that Smith et al. teaches away from the use of a central database. For these reasons, Applicants submit that independent claim 43, as well as the claims that depend therefrom, are allowable over Smith et al. and Kott whether considered separately or in combination.

With respect to independent claim 53, Applicants submit that neither Smith et al. nor Kott include a folder retainer that is configured to support file folders that are stacked vertically upon one another, such that each addressable device on each file folder in such a vertical stack is coupled to electrical contacts of the folder retainer through the conductive contacts provided on the file folders therebelow. It is noted that the Examiner has provided no explanation as to where in the references this feature is disclosed or why one of ordinary skill in the art would have considered making such a modification to the teachings contained in the cited references. If the Examiner should choose to maintain this rejection, Applicants respectfully request the Examiner to specifically point out where these features may be found in the prior art.

With respect to claims 54-63, neither Smith et al., Kott, nor Foster teaches or suggests a file tracking system comprising a plurality of folder retainers where at least one of the folder retainers is configured to support file folders in an orientation different than that in which another folder retainer supports file folders. Therefore, claims 54-63 are allowable over the prior art of record.

In the Advisory Action mailed September 12, 1997, for the parent application, the Examiner stated "with regards to the applicant's arguments re. claim 37, Kott does show a

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device which is responsive to being addressed, and Smith shows a signal being sent to the central database for maintenance of an up to date location database (see column 3, lines 5-40)." Although Kott does include folders that are responsive to being addressed, these folders do not respond in the manner specifically defined in the claims. Namely, they do not transmit a signal back to the processor. Regarding Smith et al., the tapes transmit their identification code to a memory device associated with the tape carrier upon receiving an enable signal. However, the tapes do not respond to "a control signal including the unique address associated with the addressable device," as recited in the claims. Therefore, neither Kott nor Smith et al. teaches or suggests the claimed feature. Further, for the reasons already outlined above, there would be no motivation to modify the Smith et al. reference with the Kott reference in a manner that would result in a system that performs the recited functions.

In the Advisory Action, the Examiner further stated "with regards to the applicant's arguments re. claims 41, 57, 85, 90, Smith shows addressable power data modules 64 which is equivalent to the claimed file cabinet." The power/data module 64 of Smith et al., however, is not, itself, addressable. It has no unique address associated with it as does the file cabinet defined in the claims. Therefore, the power/data modules 64 can in no way be considered an equivalent to a file cabinet. Furthermore, given that the power/data module 64 is associated with a plurality of tape carriers 12, which may be distributed in many different locations, it could not be considered the equivalent of a file cabinet which could only be in a single location.

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The Examiner further stated in the Advisory Action, that "with regards to the applicant's argument re. claim 92, the folder retainer of claim 92 is equivalent to the housing 12 of Smith." Applicants realize the Examiner is equating tape carriers 12 as being equivalent to the recited folder retainers. However, the Examiner's comment does not address the arguments made above by Applicants. Specifically, the tape carriers 12 of Smith et al. do not communicate with each of the tapes received therein over a common communication path. Instead, discrete connections are necessarily utilized to each of the slots in the tape carriers 12.

The Examiner also states "with regards to the applicant's argument re. claims 111 and 134 as per the restriction requirement it is held that the configuration of the conductors is not an essential shape in this invention. If the applicant disagrees, restriction of these claims will be reconsidered." Applicants do not understand the Examiner's comments. Clearly, the Examiner cannot disregard any limitations recited in the claims. If the configuration of the conductors is recited in the claims, the Examiner must consider these features. Applicants further state that these features had been previously presented and the Examiner had the opportunity to make any necessary restriction requirement. However, the Examiner chose not to make such a restriction requirement with respect to claims 111-134. Claims 111-134 have been re-presented in the application as claims 34-53. If Applicants had been advised of

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the need for a restriction requirement, they would not have bothered to pay the fees to present these claims in this application. However, Applicants relied upon the fact that the Examiner had not made a restriction requirement and had issued a substantive action on these claims, when deciding to present these claims in this continuation application. Therefore, claims 34-53 are properly presented in this application and should not be restricted out and should have full weight given to all the features defined therein.

Lastly, the Examiner stated "with regards to the applicant's argument re. claim 124, the term 'general information' as claimed is not limited as the applicant argues. This term can read on the address information discussed in Smith." Applicants do not understand the Examiner's comments. If the Examiner is reading the term "general information" on the address information that is stored in memory in the Smith et al. system, it is not clear what the Examiner considers to read upon the recited "unique file addresses" that are recited as a separate element maintained in the database. The fact remains that Smith et al. does not teach or suggest storing any information *in addition* to the unique identification codes (or addresses) in any form of database.

In closing, it is noted that the comments made in the Advisory Action did not fully respond to the arguments Applicants had previously presented. Insofar as those arguments are presented above, Applicants request that the Examiner fully address these arguments in order to advance the prosecution of this application.

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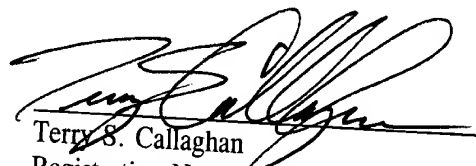
In view of the foregoing remarks, Applicants submit that the invention as defined in the pending claims, is allowable over the prior art of record. The timely allowance of the claims is requested. A Notice of Allowance is therefore respectfully solicited.

Respectfully submitted,

JOEL D. STANFIELD ET AL.

By: Price, Heneveld, Cooper,
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